

SEQUENCE LISTING

<110> Patience, Clive

<120> Swine Defective for Transmission of Porcine Endogenous
Retrovirus and Uses Thereof

<130> 61750-311

<140>

<141>

<150> U.S. 60/243695

<151> 2000-10-27

<150> U.S. 60/182965

<151> 2000-02-16

<150> U.S. 60/177003

<151> 2000-01-19

<160> 33

<170> PatentIn Ver. 2.1

<210> 1

<211> 600

<212> DNA

<213> Sus sp.

<400> 1

```
atgcatccca cgttaagccg gcgccacctc ccgattcggg gtggaaagcc gaaaagactg 60
aaaatcccct taagcttcgc ctccatcgcg tggttcctta ctctgtcaat aactcctcaa 120
gttaatggta aacgccttgt ggacagcccg aactcccata aacccttatc tctcacctgg 180
ttacttactg actccggtac aggtattaat attaacagca ctcaagggga ggctcccttg 240
gggacctggg ggccctgaatt atatgtctgc ctccgatcag taatccctgg tctcaatgac 300
caggccacac cccccgatgt actccgtgct tacggggtttt acgtttgctc aggaccccca 360
aataatgaag aatattgcgg aaatccctcag gatttccttt gcaagcaatg gagctgcgta 420
acttctaata atgggaattg gaaatggcca gtctctcagc aagacagagt aagttactct 480
tttggttaaca atcctaccag ttataatcaa ttttaattatg gccatgggag atggaaagat 540
tggcaacagc ggggtacaaa agatgtacga aataagcaaa taagctgtca ttcgttagac 600
```

<210> 2

<211> 600

<212> DNA

<213> Sus sp.

<400> 2

atgcatccca cgttaagccg gcgccacctc ccgattcggg gtggaaagcc gaaaagactg 60
aaaatcccct taagcttcgc ctccatcgcg tggttcctta ctctgtcaat aactcctcaa 120
gttaatggta aacgccttgt ggacagcccg aactcccata aacccttata tctcacctgg 180
ttacttactg actccggtac aggtattaat attaacagca ctcaagggga ggctcccttg 240
gggacctggt ggcctgaatt atatgtctgc cttcgatcag taatccctgg tctcaatgac 300
caggccacac ccccgatgt actccgtgct tacgggtttt acgtttgcc aggaccccca 360
aataatgaag aatattgtgg aaatcctcag gatttctttt gcaagcaatg gagctgcgta 420
acttctaata atgggaattg gaaatggcca gtctctcagc aagacagagt aagttactct 480
tttgtaaca atcctaccag ttataatcaa ttttaattat gccatgggag atggaaagat 540
tggcaacagc ggggtacaaa agatgtacga aataagcaaa taagctgtca ttcgttagac 600

<210> 3

<211> 540

<212> DNA

<213> *Sus sp.*

<400> 3

atgcatccca cgttaagccg gcgccacctc ccgattcggg gtggaaagcc gaaaagactg 60
aaaatcccct taagcttcgc ctccatcgcg tggttcctta ctctgtcaat aactcctcaa 120
gttaatggta aacgccttgt ggacagcccg aactcccata aacccttata tctcacctgg 180
ttacttactg actccggtac aggtattaat attaacagca ctcaagggga ggctcccttg 240
gggacctggt ggcctgaatt atatgtctgc cttcgatcag taatccctgg tctcaatgac 300
caggccacac ccccgatgt actccgtgct tacgggtttt acgtttgcc aggaccccca 360
aataatgaag aatattgtgg aaatcctcag gatttctttt gcaagcaatg gagctgcgta 420
acttctaata atgggaattg gaaatggcca gtctctcagc aagacagagt aagttactct 480
tttgtaaca atcctaccag ttataatcaa ttttaattat gccatgggag atggaaagat 540

<210> 4

<211> 600

<212> DNA

<213> *Sus sp.*

<400> 4

atgcatccca cgttaagccg gcgccacctc ccgattcggg gtggaaagcc gaaaagactg 60
aaaatcccct taagcttcgc ctccatcgcg tggttcctta ctctgtcaat aactcctcaa 120
gttaatggta aacgccttgt gaacagtcg aactcccata aacccttata tctcacctgg 180
ttacttactg actccggtac aggtattaat attaacagca ctcaagggga ggctcccttg 240
gggacctggt ggcctgaatt atatgtctgc cttcgatcag taatccctgg tctcaatgac 300
caggccacac ccccgatgt actccgtgct tacgggtttt acgtttgcc aggaccccca 360
aataatgaag aatattgtgg aaatcctcag gatttctttt gcaagcaatg gagctgcgta 420
acttctaata atgggaattg gaaatggcca gtctctcagc aagacagagt aagttactct 480
tttgtaaca atcctaccag ttataatcaa ttttaattat gccatgggag atggaaagat 540
tggcaacagc ggggtacaaa agatgtacga aataagcaaa taagctgtca ttcgttagac 600

<210> 5
 <211> 599
 <212> DNA
 <213> Sus sp.

<400> 5
 atgcatccca cgtaaagccg gcgccacctc cggattcggg gtggaaagcc gaaaagactg 60
 aaaatcccct taagcttcgc ctccatcgcg tggttcctta ctctgtcaat aactcctcaa 120
 gttaatggta aacgccttgt gaacagtcgg aactcccata aacccttata tctcacctgg 180
 ttacttactg actccggtac aggtattaat attaacagca ctcaagggga ggctcccttg 240
 gggacctggg ggcctgaatt atatgtctgc ctccgatcag taatccctgg tctcaatgac 300
 caggccacac ccccgatgt actccgtgct tacgggtttt acgtttgccc aggacccccca 360
 aataatgaag aatattgtgg aaatcctcag gatttctttt gcaagcaatg gagctgcgta 420
 acttctaata atgggaattg gaaatggcca gtctctcagc aagacagagt aagttactct 480
 tttgttaaca atcctaccag ttataatcaa ttttaattat gccatgggag atggaaagat 540
 tggcaacagc ggggtacaaa agatgtacga aataagcaaa taagctgtca ttcgtaga 599

<210> 6
 <211> 599
 <212> DNA
 <213> Sus sp.

<400> 6
 atgcatccca cgtaaagccg gcgccacctc cggattcggg gtggaaagcc gaaaagactg 60
 aaaatcccct taagcttcgc ctccatcgcg tggttcctta ctctgtcaat aactcctcaa 120
 gttaatggta aacgccttgt gaacagtcgg aactcccata aacccttata tctcacctgg 180
 ttacttactg actccggtac aggtattaat attaacagca ctcaagggga ggctcccttg 240
 gggacctggg ggcctgaatt atatgtctgc ctccgatcag taatccctgg tctcaatgac 300
 caggccacac ccccgatgt actccgtgct tacgggtttt acgtttgccc aggacccccca 360
 aataatgaag aatattgtgg aaatcctcag gatttctttt gcaagcaatg gagctgcgta 420
 acttctaata atgggaattg gaaatggcca gtctctcagc aagacagagt aagttactct 480
 tttgttaaca atcctaccag ttataatcaa ttttaattat gccatgggag atggaaagat 540
 tggcaacagc ggggtacaaa agatgtacga aataagcaaa taagctgtca ttcgtaga 599

<210> 7
 <211> 600
 <212> DNA
 <213> Sus sp.

<400> 7
 atgcatccca cgtaaagccg gcgccacctc cggattcggg gtggaaagcc gaaaagactg 60
 aaaatcccct taagcttcgc ctccatcgcg tggttcctta ctctgtcaat aactcctcaa 120
 gttaatggta aacgccttgt gaacagtcgg aactcccata aacccttata tctcacctgg 180
 ttacttactg actccggtac aggtattaat attaacagca ctcaagggga ggctcccttg 240
 gggacctggg ggcctgaatt atatgtctgc ctccgatcag taatccctgg tctcaatgac 300
 caggccacac ccccgatgt actccgtgct tacgggtttt acgtttgccc aggacccccca 360

aataatgaag aatattgtgg aaatcctcag gatttctttt gcaagcaatg gagctgcgta 420
 acttctaagt atgggaattg gaaatggcca gtctctcagc aagacagagt aagttactct 480
 tttgttaaca atcctaccag ttataatcaa ttttaattatg gccatgggag atggaaagat 540
 tggcaacagc ggggtacaaa agatgtacga aataagcaaa taagctgtca ttcgttagac 600

<210> 8

<211> 599

<212> DNA

<213> Sus sp.

<400> 8

atgcatccca cgttaagccg gcgccacctc ccgattcggg gtggaaagcc gaaaagactg 60
 aaaatccctt taagcttcgc ctccatcgcg tggttcctta ctctgtcaat aactcctcaa 120
 gttaaatggta aacgccttgt ggacagcccg aactcccata aacccttatc tctcacctgg 180
 ttacttactg actccggtac aggtattaat attaacagca ctcaagggga ggctcccttg 240
 gggacctggg ggcctgaatt atatgtctgc cttcgatcag taatccctgg tctcaatgac 300
 caggccacac cccccgatgt actccgtgct tacgggtttt acgtttgccc aggaccccca 360
 aataatgaag aatattgtgg aaatcctcag gatttctttt gcaagcaatg gagctgcgta 420
 acttctaagt atgggaattg gaaatggcca gtctctcagc aagacagagt aagttactct 480
 tttgttaaca atcctaccag ttataatcaa ttttaattatg gccatgggag atggaaagat 540
 tggcaacagc ggggtacaaa agatgtacga aataagcaaa taagctgtca ttcgttaga 599

<210> 9

<211> 599

<212> DNA

<213> Sus sp.

<400> 9

atgcatccca cgttaagccg gcgccacctc ccgattcggg gtggaaagcc gaaaagactg 60
 aaaatccctt taagcttcgc ctccatcgcg tggttcctta ctctgtcaat aactcctcaa 120
 gttaaatggta aacgccttgt ggacagcccg aactcccata aacccttatc tctcacctgg 180
 ttacttactg actccggtac aggtattaat attaacagca ctcaagggga ggctcccttg 240
 gggacctggg ggcctgaatt atatgtctgc cttcgatcag taatccctgg cctcaatgac 300
 caggccacac cccccgatgt actccgtgct tacgggtttt acgtttgccc aggaccccca 360
 aataatgaag aatattgtgg aaatcctcag gatttctttt gcaagcaatg gagctgcgta 420
 acttctaagt atgggaattg gaaatggcca gtctctcagc aagacagagt aagttactct 480
 tttgttaaca atcctaccag ttataatcaa ttttaattatg gccatgggag atggaaagat 540
 tggcaacagc ggggtacaaa agatgtacga aataagcaaa taagctgtca ttcgttaga 599

<210> 10

<211> 599

<212> DNA

<213> Sus sp.

<400> 10

atgcatccca cgtaaagccg gcgccacctc ccgattcggg gtggaaagcc gaaaagactg 60
 aaaatccctt taagcttcgc ctccatcgcg tggttcctta ctctgtcaat aactcctcaa 120
 gttaatggta aacgccttgt ggacagcccg aactcccata aacccttatc tctcacctgg 180
 ttacttactg actccggtac aggtattaat attaacagca ctcaagggga ggctcccttg 240
 gggacctggg ggccctgaatt atatgtctgc cttcgatcag taatccctgg tctcaatgac 300
 cagggcacac ccccgatgt actccgtgct tacgggtttt acgtttgccc aggaccccca 360
 aataatgaag aatattgtgg aaatcctcag gatttctttt gcaagcaatg gagctgcgta 420
 acttctaata atgggaattg gaaatggcca gtctctcagc aagacagagt aagttactct 480
 tttgttaaca atcctaccag ttataatcaa tttaattatg gccatgggag atggaaagat 540
 tggcaacagc gggtagaaaa agatgtacga aataagcaaa taagctgtca ttcgtaga 599

<210> 11

<211> 458

<212> DNA

<213> *Sus sp.*

<400> 11

gacagcccg actcccataa accctcatct ctcacctggg tacttactga ctccggtaca 60
 ggtattaata ttaacagcac tcaaggggag gctcccttgg ggacctggg gcctgaatta 120
 tatgtctgcc ttcgatcagt aatccctggg ctcaatgacc aggccacacc ccccgatgta 180
 ctccgtgctt acgggtttta cgtttgccca ggaccccaaa ataataaga atattgtgga 240
 aatcctcagg atttcttttg caagcaatgg agctgcgtaa cttctaata tggaattgg 300
 aaatggccag tctctcagca agacagagta agttactctt ttgttaaaaa tcctacctat 360
 aataatcaat ttaattatgg ccatgggaga tggaaagatt ggcaacagcg ggtacaaaaa 420
 gatgtacgaa ataagcaaat aagctgtcat tcgtaga 458

<210> 12

<211> 478

<212> DNA

<213> *Sus sp.*

<400> 12

ttaatggtaa acgccttgtg gacagcccg actcccataa acccttatct ctcacctggg 60
 tacttactga ctccggtaca ggtattaata ttaacagcac tcaaggggag gctcccttgg 120
 ggacctggg gcctgaatta tatgtctgcc ttcgatcagt aatccctggg ctcaatgacc 180
 aggccacacc ccccgatgta ctccgtgctt acgggtttta cgtttgccca ggaccccaaa 240
 ataataaga atattgtgga aatcctcagg atttcttttg caggcaatgg agctgcgtaa 300
 cttctaata tggaattgg aaatggccag tctctcagca agacagagta agttactctt 360
 ttgttaaaaa tcctaccagt tataatcaat ttaattatgg ccatgggaga tggaaagatt 420
 ggcaacagcg ggtacaaaaa gatgtacgaa ataagcaaat aagctgtcat tcgtaga 478

<210> 13

<211> 478

<212> DNA

<213> *Sus sp.*

<400> 13

```
ttaatggttaa acgccttgtg gacagcccgga actcccataa acccttatct ctcacctggt 60
tacttactga ctccggtaca ggtattaata ttaacagcac tcaaggggag gctcccttgg 120
ggacctggtg gcctgaatta tatgtctgcc ttcgatcagt aatccctggt ctcaatgacc 180
aggccacacc ccccgatgta ctccgtgctt acggggtttta cgtttgccca ggacccccaa 240
ataatgaaga atattgtgga aatcctcagg atttcttttg caagcaatgg agctgcgtaa 300
cttctaataga tgggaattgg aaatggccag tctctcagca agacagagta agttactctt 360
ttgttaacaa tcctaccagt tataatcaat ttaattatgg ccatgggaga tggaaagatt 420
ggcaacagcg ggtacaaaaa gatgtacgaa ataagcaaat aagctgtcat tcgttaga 478
```

<210> 14

<211> 458

<212> DNA

<213> *Sus sp.*

<400> 14

```
gacagcccgga actcccataa acccttatct ctcacctggt tacttactga ctccggtaca 60
ggtattaata ttaacagcac tcaaggggag gctcccttgg ggacctggtg gcctgaatta 120
tatgtctgcc ttcgatcagt aatccctggt ctcaatgacc aggccacacc ccccgatgta 180
ctccgtgctt acggggtttta cgtttgccca ggacccccaa ataatgaaga atattgtgga 240
aatcctcagg atttcttttg caagcaatgg agctgcgtaa cttctaataga tgggaattgg 300
aaatggccag tctctcagca agacagagta agttactctt ttgttaacaa tcctaccagt 360
tataatcaat ttaattatgg ccatgggaga tggaaagatt ggcaacagcg ggtacaaaaa 420
gatgtacgaa ataagcaaat aagctgtcat tcgttaga 458
```

<210> 15

<211> 478

<212> DNA

<213> *Sus sp.*

<400> 15

```
ttaatggttaa acgccttgtg gacagcccgga actcccataa acccttatct ctcacctggt 60
tacttactga ctccggtaca ggtattaata ttaacagcac tcaagaggag gctcccttgg 120
ggacctggtg gcctgaatta tatgtctgcc ttcgatcagt aatccctggt ctcaatgacc 180
aggccacacc ccccgatgta ctccgtgctt acggggtttta cgtttgccca ggacccccaa 240
ataatgaaga atattgtgga aatcctcagg atttcttttg caagcaatgg agctgcgtaa 300
cttctaataga tgggaattgg aaatggccag tctctcagca agacagagta agttactctt 360
ttgttaacaa tcctaccagt tataatcaat ttaattatgg ccatgggaga tggaaagatt 420
ggcaacagcg ggtacaaaaa gatgtacgaa ataagcaaat aagctgtcat tcgttaga 478
```

<210> 16

<211> 478

<212> DNA

<213> *Sus sp.*

<400> 16

ttaatggtat ggccttctgt gactgcccga actcccataa acccttatct ctcacctggt 60
tacttactga ctccggtaca ggtattaata ttaacatcac tcaaggggag gctcccttgg 120
ggacctggtg gcctgaatta tatgtctgcc ttccgatcagt aatccctggt ctcaatgacc 180
aggccacacc ccccgatgta ctccgtgctt acgggtttta cgtttgcccc ggacccccaa 240
ataatgaaga atattgtgga aatcctcagg atttcttttg caagcaatgg agctgcgtaa 300
cttctaataa tgggaattgg aaatggccag tctctcagca agacagagta agttactctt 360
ttgttaacaa tcctaccagt tataatcaat ttaattatgg ccatgggaga tggaaagatt 420
ggcaacagcg ggtacaaaaa gatgtacgaa ataagcaaat aagctgtcat tcgttaga 478

<210> 17

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer
sequence used in amplification of PERV-sequences.

<400> 17

gtgtgttctg gatctgttgg tttc

24

<210> 18

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer
sequence used in amplification of PERV-sequences.

<400> 18

ccacgcaggg gtagaggact

20

<210> 19

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer
sequence used in amplification of PERV-sequences.

<400> 19

ctaggaggat cacaggctgc

20

<210> 20

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer
sequence used in amplification of PERV-sequences.

<400> 20

cctgggtggtc tcctactgtc g

21

<210> 21

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer
sequence used in amplification of PERV-sequences.

<400> 21

gtgtgtcttg atctgttggt ttc

23

<210> 22

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer
sequence used in amplification of PERV-sequences.

<400> 22

tgctgtcttg tggaagacg

19

<210> 23

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer
sequence used in amplification of PERV-sequences.

<400> 23

gcttttatgg gggtcacaaac aaa

23

<210> 24

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer
sequence used in amplification of PERV-sequences.

<400> 24

ccacgcaggg gtagaggact

20

<210> 25

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer
sequence used in amplification of PERV-sequences.

<400> 25

cctaccagtt ataatacaatt taattatggc

30

<210> 26

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer
sequence used in amplification of PERV-sequences.

<400> 26

aggttgtatt gtaatcagag ggg

23

<210> 27

<211> 27

<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer
sequence used in amplification of PERV-sequences.

<400> 27

cgtaggtcct tactctgtca ataactc

27

<210> 28

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer
sequence used in amplification of PERV-sequences.

<400> 28

ctaagatgg gaattggaaa tgg

23

<210> 29

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer
sequence used in amplification of PERV-sequences.

<400> 29

gctyaccctt actgaggttt ctgg

24

<210> 30

<211> 29

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer
sequence used in amplification of PERV-sequences.

<400> 30

ggacttagta acctacatcg aattgtaac

29

<210> 31
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer
sequence used in amplification of PERV-sequences.

<400> 31
ccaacaagaa gaggtagcct ctg

23

<210> 32
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer
sequence used in amplification of PERV-sequences.

<400> 32
ggatcttccg ttacaattcg atgtag

26

<210> 33
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer
sequence used in amplification of PERV-sequences.

<400> 33
tctcgactt tttgaccaca ccaacg

26